

Optional calculation methods also are provided for accounts involving daily periodic rates. (§226.14(d))

Brief Outline for Open-End Credit APR Calculations on Periodic Statements

NOTE: Assume monthly billing cycles for each of the calculations below.

I. APR when finance charge is determined solely by applying one or more periodic rates:

A. Monthly periodic rates:

1. Monthly rate $\times 12 = \text{APR}$
or
2. (Total finance charge / applicable balance³) $\times 12 = \text{APR}$

This calculation may be used when different rates apply to different balances.

B. Daily periodic rates:

1. Daily rate $\times 365 = \text{APR}$
or
2. (Total finance charge / average daily balance) $\times 12 = \text{APR}$
or
3. (Total finance charge / sum of balances) $\times 365 = \text{APR}$

II. APR when finance charge includes a minimum, fixed, or other charge that is not calculated using a periodic rate (and does not include charges related to a specific transaction, like cash advance fees):

A. Monthly periodic rates:

1. (Total finance charge / amount of applicable balance) $\times 12 = \text{APR}^4$

B. Daily periodic rates

1. (Total finance charge / amount of applicable balance) $\times 365 = \text{APR}$
2. The following may be used if at least a portion of the finance charge is determined by the application of a daily periodic rate. If not, use the formula above.
 - a. (Total finance charge / average daily balance) $\times 12 = \text{APR}$
or
 - b. (Total finance charge / sum of balances) $\times 365 = \text{APR}$

C. Monthly and daily periodic rates

1. If the finance charge imposed during the billing cycle does not exceed \$.50 for a monthly or longer billing cycles (or pro rata part of \$.50 for a billing cycle shorter than monthly), the APR may be calculated by multiplying the monthly rate by 12 or the daily rate by 365.

III. If the total finance charge included a charge related to a specific transaction (such as a cash advance fee), even if the total finance charge also included any other minimum, fixed, or other charge not calculated using a periodic rate, then the monthly and daily APRs are calculated as follows: (total finance charge / the greater of: the transaction amounts that created the transaction fees or the sum of the balances and other amounts on which a finance charge was imposed during the billing cycle⁵) \times number of billing cycles in a year (12) = APR⁶

Subpart C—Closed-End Credit

The following is not a complete discussion of the closed-end credit requirements in the Truth in Lending Act. Instead, the information provided below is offered to clarify otherwise confusing terms and requirements. Refer to §226.17 through §226.24 and related commentary for a more thorough understanding of the Act.

Finance Charge (Closed-End Credit) §226.17(a)

The aggregate total amount of the finance charge must be disclosed. Each finance charge imposed need not be individually itemized and must not be itemized with the segregated disclosures.

Annual Percentage Rate (Closed-End Credit) §226.22

Accuracy Tolerances

The disclosed APR on a closed-end transaction is accurate for:

- Regular transactions (which include any single advance transaction with equal payments and equal payment periods, or an irregular first payment period and/or a first or last irregular payment), if it is within one-eighth of 1 percentage point of the APR calculated under Regulation Z (§226.22(a)(2)).
- Irregular transactions (which include multiple advance transactions and other transactions not considered regular), if it is within one-quarter of 1 percentage point of the APR calculated under Regulation Z (§226.22(a)(3)).
- Mortgage transactions, if it is within one-eighth of 1 percentage point for regular transactions or one-quarter of 1 percentage point for irregular transactions and:

³ If zero, no APR can be determined. The amount of applicable balance is the balance calculation method and may include the average daily balance, adjusted balance, or previous balance method.

⁴ Loan fees, points, or similar finance charges that related to the opening of the account must not be included in the calculation of the APR.

⁵ The sum of the balances may include the average daily balance, adjusted balance, or previous balance method. Where a portion of the finance charge is determined by application of one or more daily periodic rates, sum of the balances also means the average of daily balances.

⁶ Cannot be less than the highest periodic rate applied, expressed as an APR.

1. The rate results from the disclosed finance charge; and
2. The disclosed finance charge would be considered accurate under §226.18(d)(1) or §226.23(g) or (h) (§226.22(a)(4)).

NOTE: There is an additional tolerance for mortgage loans when the disclosed finance charge is calculated incorrectly but is considered accurate under §226.18(d)(1) or §226.23(g) or (h) (§226.22(a)(5)).

Construction Loans §226.17(c)(6) and Appendix D

Construction and certain other multiple advance loans pose special problems in computing the finance charge and APR. In many instances, the amount and dates of advances are not predictable with certainty since they depend on the progress of the work. Regulation Z provides that the APR and finance charge for such loans may be estimated for disclosure.

At its option, the financial institution may rely on the representations of other parties to acquire necessary information (for example, it might look to the consumer for the dates of advances). In addition, if either the amounts or dates of advances are unknown (even if some of them are known), the financial institution may, at its option, use appendix D to the regulation to make calculations and disclosures. The finance charge and payment schedule obtained through appendix D may be used with volume one of the Federal Reserve Board's APR tables or with any other appropriate computation tool to determine the APR. If the financial institution elects not to use appendix D, or if appendix D cannot be applied to a loan (e.g., appendix D does not apply to a combined construction-permanent loan if the payments for the permanent loan begin during the construction period), the financial institution must make its estimates under §226.17(c)(2) and calculate the APR using multiple advance formulas.

On loans involving a series of advances under an agreement to extend credit up to a certain amount, a financial institution may treat all of the advances as a single transaction or disclose each advance as a separate transaction. If advances are disclosed separately, disclosures must be provided before each advance occurs, with the disclosures for the first advance provided before consummation.

In a transaction that finances the construction of a dwelling that may or will be permanently financed by the same financial institution, the construction-permanent financing phases may be disclosed in one of three ways listed below.

- As a single transaction, with one disclosure combining both phases.
- As two separate transactions, with one disclosure for each phase.

- As more than two transactions, with one disclosure for each advance and one for the permanent financing phase.

If two or more disclosures are furnished, buyer's points or similar amounts imposed on the consumer may be allocated among the transactions in any manner the financial institution chooses, as long as the charges are not applied more than once. In addition, if the financial institution chooses to give two sets of disclosures and the consumer is obligated for both construction and permanent phases at the outset, both sets of disclosures must be given to the consumer initially, before consummation of each transaction occurs.

If the creditor requires interest reserves for construction loans, special appendix D rules apply that can make the disclosure calculations quite complicated. The amount of interest reserves included in the commitment amount must not be treated as a prepaid finance charge.

If the lender uses appendix D for construction-only loans with required interest reserves, the lender must estimate construction interest using the interest reserve formula in appendix D. The lender's own interest reserve values must be completely disregarded for disclosure purposes.

If the lender uses appendix D for combination construction-permanent loans, the calculations can be much more complex. Appendix D is used to estimate the construction interest, which is then measured against the lender's contractual interest reserves.

If the interest reserve portion of the lender's contractual commitment amount exceeds the amount of construction interest estimated under appendix D, the excess value is considered part of the amount financed if the lender has contracted to disburse those amounts whether they ultimately are needed to pay for accrued construction interest. If the lender will not disburse the excess amount if it is not needed to pay for accrued construction interest, the excess amount must be ignored for disclosure purposes.

Calculating the Annual Percentage Rate §226.22

The APR must be determined under one of the following:

- The actuarial method, which is defined by Regulation Z and explained in appendix J to the regulation.
- The U.S. Rule, which is permitted by Regulation Z and briefly explained in appendix J to the regulation. The U.S. Rule is an accrual method that seems to have first surfaced officially in an early nineteenth century United States Supreme Court case, *Story v. Livingston* (38 U.S. 359).

Whichever method is used by the financial institution, the rate calculated will be accurate if it is able to "amortize" the amount financed while it generates the finance charge under the accrual method selected. Financial institutions also

may rely on minor irregularities and accuracy tolerances in the regulation, both of which effectively permit somewhat imprecise, but still legal, APRs to be disclosed.

360-Day and 365-Day Years §226.17(c)(3)

Confusion often arises over whether to use the 360-day or 365-day year in computing interest, particularly when the finance charge is computed by applying a daily rate to an unpaid balance. Many single payment loans or loans payable on demand are in this category. There are also loans in this category that call for periodic installment payments.

Regulation Z does not require the use of one method of interest computation in preference to another (although state law may). It does, however, permit financial institutions to disregard the fact that months have different numbers of days when calculating and making disclosures. This means financial institutions may base their disclosures on calculation tools that assume all months have an equal number of days, even if their practice is to take account of the variations in months to collect interest.

For example, a financial institution may calculate disclosures using a financial calculator based on a 360-day year with 30-day months, when, in fact, it collects interest by applying a factor of 1/365 of the annual interest rate to actual days.

Disclosure violations may occur, however, when a financial institution applies a daily interest factor based on a 360-day year to the actual number of days between payments. In those situations, the financial institution must disclose the higher values of the finance charge, the APR, and the payment schedule resulting from this practice.

For example, a 12 percent simple interest rate divided by 360 days results in a daily rate of .033333 percent. If no charges are imposed except interest, and the amount financed is the same as the loan amount, applying the daily rate on a daily basis for a 365-day year on a \$10,000 one year, single payment, unsecured loan results in an APR of 12.17 percent (.033333% x 365 = 12.17%), and a finance charge of \$1,216.67. There would be a violation if the APR were disclosed as 12 percent or if the finance charge were disclosed as \$1,200 (12% x \$10,000).

However, if there are no other charges except interest, the application of a 360-day year daily rate over 365 days on a regular loan would not result in an APR in excess of the one eighth of one percentage point APR tolerance unless the nominal interest rate is greater than 9 percent. For irregular loans, with one-quarter of 1 percentage point APR tolerance, the nominal interest rate would have to be greater than 18 percent to exceed the tolerance.

Variable Rate Information §226.18(f)

If the terms of the legal obligation allow the financial institution, after consummation of the transaction, to increase the APR, the financial institution must furnish the consumer with certain information on variable rates. Graduated payment mortgages and step-rate transactions without a variable rate feature are not considered variable rate transactions. In addition, variable rate disclosures are not applicable to rate increases resulting from delinquency, default, assumption, acceleration, or transfer of the collateral.

Some of the more important transaction-specific variable rate disclosure requirements under §226.18 follow.

- Disclosures for variable rate loans must be given for the full term of the transaction and must be based on the terms in effect at the time of consummation.
- If the variable rate transaction includes either a seller buydown that is reflected in a contract or a consumer buydown, the disclosed APR should be a composite rate based on the lower rate for the buydown period and the rate that is the basis for the variable rate feature for the remainder of the term.
- If the initial rate is not determined by the index or formula used to make later interest rate adjustments, as in a discounted variable rate transaction, the disclosed APR must reflect a composite rate based on the initial rate for as long as it is applied and, for the remainder of the term, the rate that would have been applied using the index or formula at the time of consummation (i.e., the fully indexed rate).
 - If a loan contains a rate or payment cap that would prevent the initial rate or payment, at the time of the adjustment, from changing to the fully indexed rate, the effect of that rate or payment cap needs to be reflected in the disclosures.
 - The index at consummation need not be used if the contract provides a delay in the implementation of changes in an index value (e.g., the contract indicates that future rate changes are based on the index value in effect for some specified period, like 45 days before the change date). Instead, the financial institution may use any rate from the date of consummation back to the beginning of the specified period (e.g., during the previous 45-day period).
- If the initial interest rate is set according to the index or formula used for later adjustments, but is set at a value as of a date before consummation, disclosures should be based on the initial interest rate, even though the index may have changed by the consummation date.

For variable-rate loans that are not secured by the consumer's principal dwelling or that are secured by the consumer's principal dwelling but have a term of one year or less,

creditors must disclose the circumstances under which the rate may increase, any limitations on the increase, the effect of an increase, and an example of the payment terms that would result from an increase. §226.18(f)(1).

For variable-rate consumer loans secured by the consumer's principal dwelling and having a maturity of more than one year, creditors must state that the loan has a variable-rate feature and that disclosures were previously given. (§226.18(f)(2)) Extensive disclosures about the loan program are provided when consumers apply for such a loan (§226.19(b), and throughout the loan term when the rate or payment amount is changed (§226.20(c)).

Payment Schedule §226.18(g)

The disclosed payment schedule must reflect all components of the finance charge. It includes all payments scheduled to repay loan principal, interest on the loan, and any other finance charge payable by the consumer after consummation of the transaction.

However, any finance charge paid separately before or at consummation (e.g., odd days' interest) is not part of the payment schedule. It is a prepaid finance charge that must be reflected as a reduction in the value of the amount financed.

At the creditor's option, the payment schedule may include amounts beyond the amount financed and finance charge (e.g., certain insurance premiums or real estate escrow amounts such as taxes added to payments). However, when calculating the APR, the creditor must disregard such amounts.

If the obligation is a renewable balloon payment instrument that unconditionally obligates the financial institution to renew the short-term loan at the consumer's option or to renew the loan subject to conditions within the consumer's control, the payment schedule must be disclosed using the longer term of the renewal period or periods. The long-term loan must be disclosed with a variable rate feature.

If there are no renewal conditions or if the financial institution guarantees to renew the obligation in a refinancing, the payment schedule must be disclosed using the shorter balloon payment term. The short-term loan must be disclosed as a fixed rate loan, unless it contains a variable rate feature during the initial loan term.

Amount Financed §226.18(b)

Definition

The amount financed is the net amount of credit extended for the consumer's use. It should not be assumed that the amount financed under the regulation is equivalent to the note amount, proceeds, or principal amount of the loan. The amount

financed normally equals the total of payments less the finance charge.

To calculate the amount financed, all amounts and charges connected with the transaction, either paid separately or included in the note amount, must first be identified. Any prepaid, precomputed, or other finance charge must then be determined.

The amount financed must not include any finance charges.

If finance charges have been included in the obligation (either prepaid or precomputed), they must be subtracted from the face amount of the obligation when determining the amount financed. The resulting value must be reduced further by an amount equal to any prepaid finance charge paid separately. The final resulting value is the amount financed.

When calculating the amount financed, finance charges (whether in the note amount or paid separately) should not be subtracted more than once from the total amount of an obligation. Charges not in the note amount and not included in the finance charge (e.g., an appraisal fee paid separately in cash on a real estate loan) are not required to be disclosed under Regulation Z and must not be included in the amount financed.

In a multiple advance construction loan, proceeds placed in a temporary escrow account and awaiting disbursement in draws to the developer are not considered part of the amount financed until actually disbursed. Thus, if the entire commitment amount is disbursed into the lender's escrow account, the lender must not base disclosures on the assumption that all funds were disbursed immediately, even if the lender pays interest on the escrowed funds.

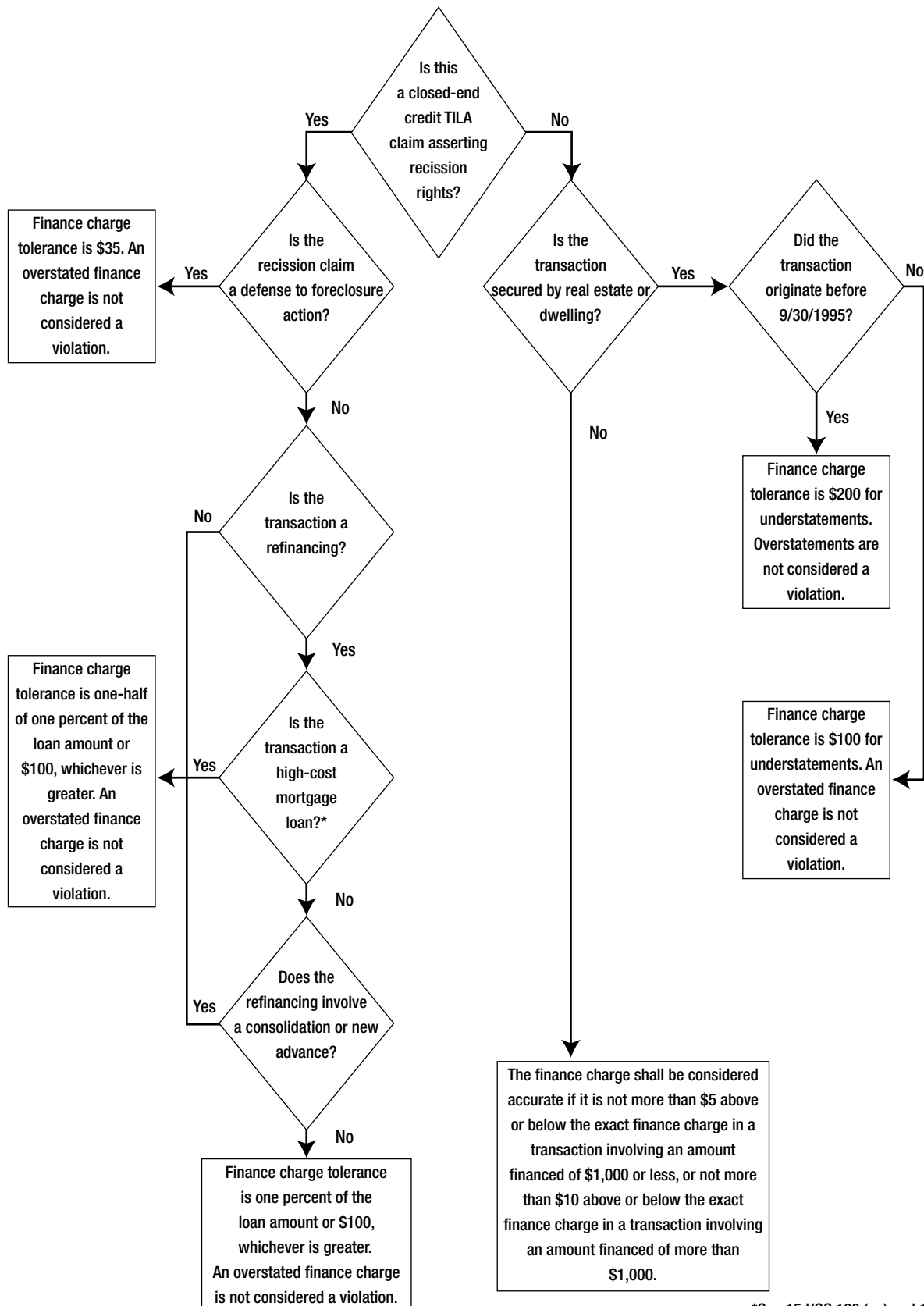
Required Deposit §226.18(r)

A required deposit, with certain exceptions, is one that the financial institution requires the consumer to maintain as a condition of the specific credit transaction. It can include a compensating balance or a deposit balance that secures the loan. The effect of a required deposit is not reflected in the APR. Also, a required deposit is not a finance charge since it is eventually released to the consumer. A deposit that earns at least 5 percent per year need not be considered a required deposit.

Calculating the Amount Financed

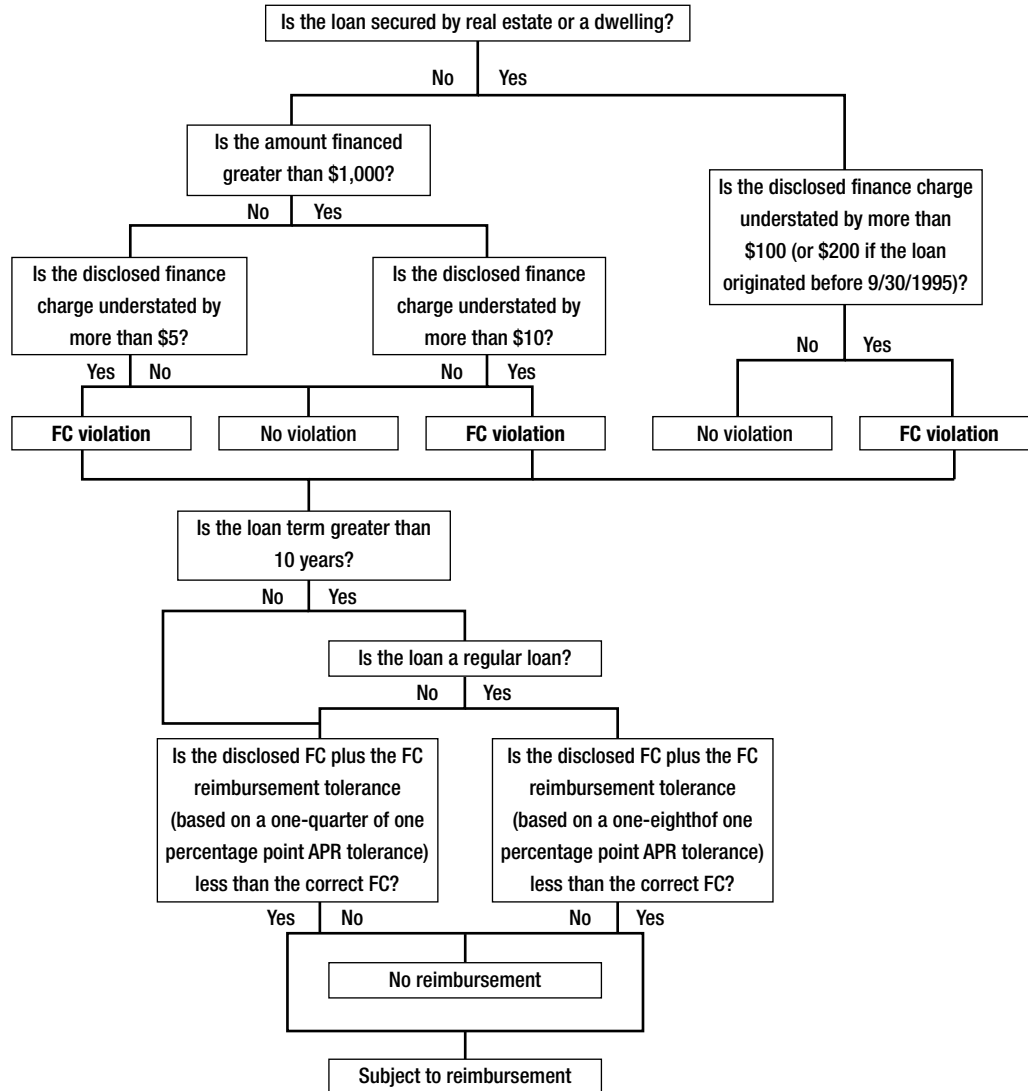
A consumer signs a note secured by real property in the amount of \$5,435. The note amount includes \$5,000 in proceeds disbursed to the consumer, \$400 in precomputed interest, \$25 paid to a credit reporting agency for a credit report, and a \$10 service charge. Additionally, the consumer pays a \$50 loan fee separately in cash at consummation. The

Closed-End Credit: Finance Charge Accuracy Tolerances

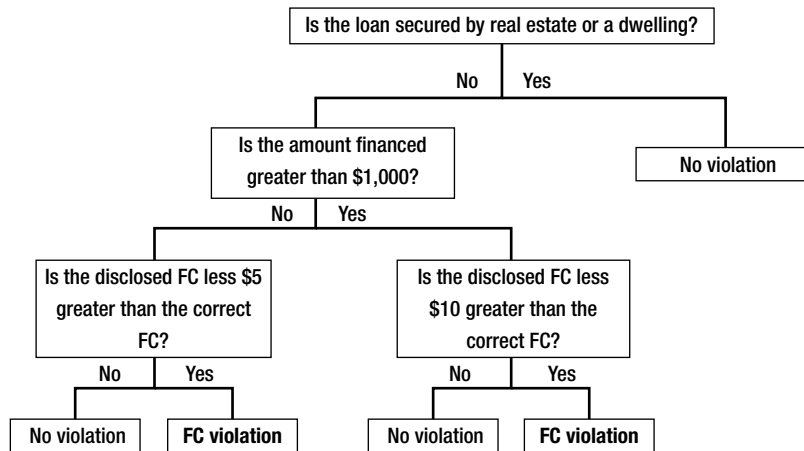


*See 15 USC 160 (aa) and 12 CFR 226.32

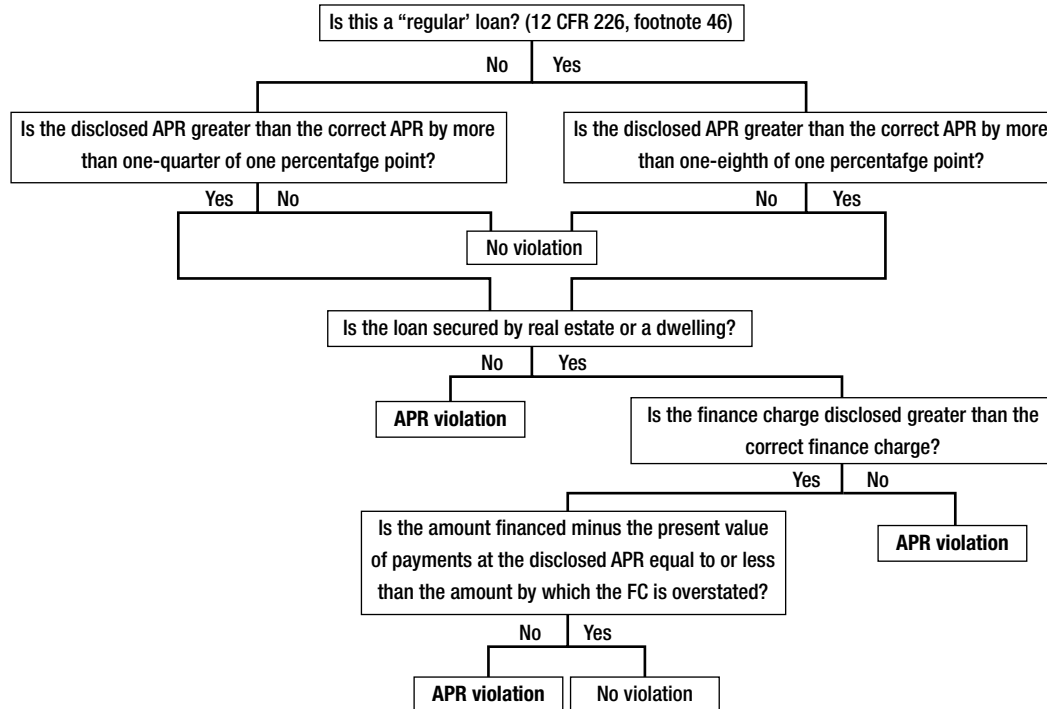
Closed-End Credit: Accuracy and Reimbursement Tolerances for Understated Finance Charges



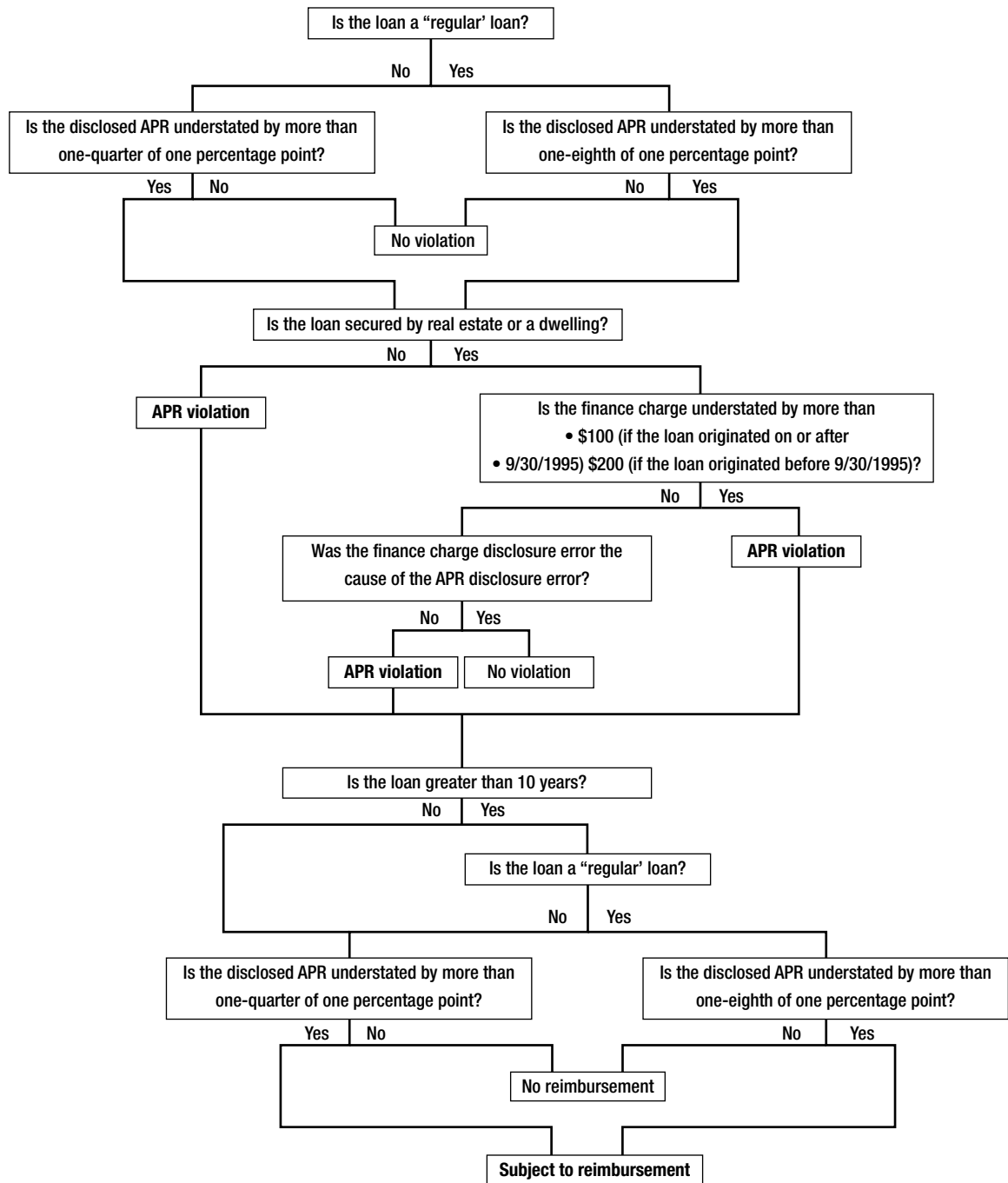
Closed-End Credit: Overstated Finance Charge Accuracy Tolerances



Closed-End Credit: Accuracy Tolerances for Overstated APRs



Closed-End Credit: Accuracy and Reimbursement Tolerances for Understated APRs



consumer has no other debt with the financial institution. The amount financed is \$4,975.

The amount financed may be calculated by first subtracting all finance charges included in the note amount (\$5,435 - \$400 - \$10 = \$5,025). The \$25 credit report fee is not a finance charge because the loan is secured by real property. The \$5,025 is further reduced by the amount of prepaid finance charges paid separately, for an amount financed of \$5,025 - \$50 = \$4,975. The answer is the same whether finance charges included in the obligation are considered prepaid or precomputed finance charges.

The financial institution may treat the \$10 service charge as an addition to the loan amount and not as a prepaid finance charge. If it does, the loan principal would be \$5,000. The \$5,000 loan principal does not include either the \$400 or the \$10 precomputed finance charge in the note. The loan principal is increased by other amounts that are financed which are not part of the finance charge (the \$25 credit report fee) and reduced by any prepaid finance charges (the \$50 loan fee, not the \$10 service charge) to arrive at the amount financed of \$5,000 + \$25 - \$50 = \$4,975.

Other Calculations

The financial institution may treat the \$10 service charge as a prepaid finance charge. If it does, the loan principal would be \$5,010. The \$5,010 loan principal does not include the \$400 precomputed finance charge. The loan principal is increased by other amounts that are financed which are not part of the finance charge (the \$25 credit report fee) and reduced by any prepaid finance charges (the \$50 loan fee and the \$10 service charge withheld from loan proceeds) to arrive at the same amount financed of \$5,010 + \$25 - \$50 - \$10 = \$4,975.

Refinancings §226.20

When an obligation is satisfied and replaced by a new obligation to the original financial institution (or a holder or servicer of the original obligation) and is undertaken by the same consumer, it must be treated as a refinancing for which a complete set of new disclosures must be furnished. A refinancing may involve the consolidation of several existing obligations, disbursement of new money to the consumer, or the rescheduling of payments under an existing obligation. In any form, the new obligation must completely replace the earlier one to be considered a refinancing under the regulation. The finance charge on the new disclosure must include any unearned portion of the old finance charge that is not credited to the existing obligation. (§226.20(a))

The following transactions are not considered refinancings even if the existing obligation is satisfied and replaced by a new obligation undertaken by the same consumer:

- A renewal of an obligation with a single payment of principal and interest or with periodic interest payments and a final payment of principal with no change in the original terms.
- An APR reduction with a corresponding change in the payment schedule.
- An agreement involving a court proceeding.
- Changes in credit terms arising from the consumer's default or delinquency.
- The renewal of optional insurance purchased by the consumer and added to an existing transaction, if required disclosures were provided for the initial purchase of the insurance.

However, even if it is not accomplished by the cancellation of the old obligation and substitution of a new one, a new transaction subject to new disclosures results if the financial institution:

- Increases the rate based on a variable rate feature that was not previously disclosed; or
- Adds a variable rate feature to the obligation.

If, at the time a loan is renewed, the rate is increased, the increase is not considered a variable rate feature. It is the cost of renewal, similar to a flat fee, as long as the new rate remains fixed during the remaining life of the loan. If the original debt is not canceled in connection with such a renewal, the regulation does not require new disclosures. Also, changing the index of a variable rate transaction to a comparable index is not considered adding a variable rate feature to the obligation.

Subpart D—Miscellaneous

Civil Liability §130

If a creditor fails to comply with any requirements of the TILA, other than with the advertising provisions of chapter 3, it may be held liable to the consumer for:

- Actual damage, and
- The cost of any legal action together with reasonable attorney's fees in a successful action.

If it violates certain requirements of the TILA, the creditor also may be held liable for either of the following:

- In an individual action, twice the amount of the finance charge involved, but not less than \$100 or more than \$1,000. However, in an individual action relating to a closed-end credit transaction secured by real property or a dwelling, twice the amount of the finance charge involved, but not less than \$200 or more than \$2,000.